The Times and Register.

VOL. XXIX. No. 15. PHILADELPHIA, APRIL 13, 1895. WHOLE No. 866.

Original.

HEREDITY: ITS RELATION TO INSANITY AND IDIOCY.

By John B. Chapin, M. D.,
Pennsylvania Hospital for the Insane.

(Read January 23, 1895.)

In response to an invitation from your President and Secretary to participate in a discussion of the subject of "Heredity in its Relation to Insanity and Idiocy," a promise was made to divide with others the time that might be assigned to its consideration.

There has always existed a deep-seated conviction that certain diseases are transmissible by inheritance from parent to offspring. This conviction is strongly fortified by an array of statistics which, if accepted without reservation, might in themselves establish the fact. It is quite common to place insanity and idiocy in this category. So prevalent is the belief that insanity is directly transmitted by inheritance that in medico-legal proceedings it is usual to consider it a strong defense to show that insanity existed in the family of a person charged with crime. So well-grounded is the opinion that insanity may be due to a direct inheritance that its existence is the shadow that darkens households, affects plans of domestic arrangements, blights the happiness, and shapes the destinies of a large number of persons. Doubtless the mystery that surrounds the complex operations of the mind—the reported results of observations by physicians—the absolute ignorance of the laws of heredity—beyond the ken of human comprehension—have together conduced to the acceptance of speculations as actual results of well-established facts. Doubtless religious views, coincidences of events, overworked facts and ignorance have exercised an influence in the formation of opinions of this subject and their unquestioned acceptance.

That every species produces its kind is a universally recognized law. That there are physical and psychical characteristics which belong to the individuals making up the many nationalities which are transmitted and preserved from generation to generation; that there are so-called temperaments which have a certain uniformity of physical and psychical development so that they may be recognized and described, is a matter of common observation. Darwin has also presented the theory "that each of the atoms or units constituting an organism reproduces itself."

Heredity manifests itself in family likeness, the hair, gait, height, form, temperament and physical development. The "atoms or units" proceed in accordance with some uniform law of development, so that, however the stock may be crossed, the rule is that man transmits his exact physical counterpart, subject to modification due to environment, climatic conditions, etc. That the vigor of the stock does not abate is witnessed in the fecundity of the human race.

Whether a similar unvarying law governs the transmissibility of psychical qualities may be a question or in doubt. The same consensus of opinion, however, is disposed to conclude that mental traits are transmitted from parents to children in the same degree that physical qualities are inherited. This is partly true only, but the exceptions are so numerous that it may be considered

a chance that the children will possess the psychical qualities of the parents. It has been demonstrated by histories of families in England that strong qualities of mind have been transmitted through generations. On the other hand, this Society may be familiar with the history of a family in New York State comprising 1200 persons of several generations, traced by Mr. Dugdale, who as paupers, lunatics, idiots, criminals, murderers and prostitutes were estimated to have cost the county of Ulster the enormous sum of $1,300,000. In making inquiry of the ancestry of a certain family in Yates County, New York, it was ascertained definitely that 22 insane persons, criminals, paupers, or idiots, could be traced in two generations to an abandoned woman. The influence of marriages of consanguinity deserves a notice in this connection. Dr. S. M. Bemiss collected some statistics which show the nature of the deterioration that may come from this source. Of ten instances of incestuous commerce, 31 children were born; 29 were defective, viz., 19 idiots, the balance epileptic or deformed. Of 823 marriages of cousins, 3942 children were born, of whom 1105 were defective, 145 deaf and dumb, 85 blind, 308 idiotic, 60 epileptic, and only 38 insane. The results of consanguineous marriages furnish a heredity of physical imperfections rather than of psychical disease. Notwithstanding these results, and the necessarily crude notions that commonly prevail, as well as the probabilities they suggest, it must be stated there is absolutely no unvarying law of transmission established by these reported facts, because of well-known exceptions.

The average normal psychical development is not as often due to transmission or inheritance as to influences of environment, education, the degree of mental receptivity, together with the evolution that goes on from age to age. The quality called genius and knowledge does not seem to be transmitted by inheritance, but a receptive faculty, a capacity to acquire knowledge and evolve ideas, may be a heredity. The term heredity is well-defined as "the principle or fact of the transmission of psychical or mental qualities or tendencies from ancestors." (Gould's Medical Dictionary.) The instance of the transmission of "qualities and tendencies" that have been cited, and those results which sometimes appear after consanguineous marriages are marked examples of both physical and psychical deteriorations, mental and moral degeneration, of mental and bodily failure—increasing in intensity with successive generations—and of those defects that follow such marriages, according to the principle of reversion or degeneration, in a backward direction, even to the extinction of the line of succession. Dr. Seguin observed: "I have not, to my knowledge, ever had to attend an idiotic son of an idiot, or even the son of a man of weak intellect."

A hereditary disease is one that may be transmitted directly from parent to child. Admitting that it is established that certain physical diseases are inherited, can it be shown that insanity should be classed in this category? If it is not an inheritance, may it not in certain cases be ascribed more properly to the results of heredity? And within what limitations? Individual opinions, formed from a knowledge confined to a limited number of cases, lead some to a conclusion without further reflection. Psychological theorizing leads others to collect data to support their views, and a personal element comes to enter in to throw doubt about the value of any statistics. Hospitals for the insane have contributed their quota, which their medical officers have reported. Thus, Esquirol reported .33 per cent. of his cases were hereditary; Brigham, .26 per cent.; Thurman, .32 per cent.; Aubanel, .4 per cent.; Burrows, .85 per cent.; Hood, .9 per cent.; Moreau, .90 per cent. These statistics were all compiled prior to 1860, and cover a period of 50 years. What rule was applied in their preparation does not appear. The wide range of results at once suggests a great lack of uniformity of material, wide differences

in opinion about what constitutes inherited insanity, and a wide latitude in speculation. Since 1860, the percentum of reported cases of hereditary insanity has dcidedly fallen off, although insanity has greatly increased. In some reports of hospitals neither the terms "hereditary insanity" nor "heredity" appear in the list of assigned "causes." In other hospitals the number of cases assigned to heredity has been steadily declining. At the Pennsylvania Hospital for the Insane, of 10,562 cases, heredity was assigned as a cause of insanity in eight cases in every thousand. At the Utica (N. Y.) State Hospital, where statistics have been prepared with a considerable degree of uniformity, the annual percentage varies from four to six. While in some of the American hospitals it is somewhat larger than that just named, generally the reported percentage in European hospitals is very much greater than in this country. Possibly this is owing to different social conditions that prevail, in-breeding, debauchery of parents, greater mental and physical deterioration, the lines on which observers have macre up their statistics, as well as the tendency to accept and follow views of recognized authorities. Whatever may be the explanation of the differences of reported results, it is apparent that in recent years the tendency is to attach less importance to the assumption that insanity is directly transmissible by inheritance. By many it is wholly ignored as a direct factor in the production of any considerable amount of insanity; at least inheritance is not named as an assigned cause. If the statistics presented had been prepared by observers holding the same theories, and from exactly the same data, there could be but one conclusion—that the inheritance of insanity (if there be such a thing) is rapidly diminishing.

Referring to personal observations, an examination of 347 patients admitted during two years in the Pennsylvania Hospital showed that the probable and direct causes of insanity in 188 cases was neurasthenia, or nervous exhaustion from overwork, strain and worriment; some form of general ill-health; the puerperal state; septic conditions. etc., and the element of inheritance did not appear or was not ascertained. The remainder were cases of paresis and other forms due to brain degenerations, senile failure, or organic disease, some with a history of marked heredity. Twenty-seven, or 14 per cent., only had a family history sufficiently marked to warrant the assumption that heredity was the probable cause of insanity—that is to say, there had been insanity in parents or along a family line. Exceptionally marked instances of insanity in families have come under my notice, of which two may be briefly presented: Three sisters were brought to the Pennsylvania Hospital on the same day. A brother, said to have been demented, had died about two weeks previously, as was inferred, from gradual inanition and neglect. All had similar delusions of suspicion, of the operation of unseen agencies, which extended to their food, clothing, beds, the air of their rooms. The family history could not be obtained satisfactorily on account of the extreme reticence of all parties. The father had held a high official position under the Government. It was an illustration of those cases of rare occurrence where insanity is communicable in a family, or to persons closely allied in companionship and life, with few relations to the world about them. In this case one sister became insane, and gradually dominated by her superior will-power the other two. From the eccentricities of these people, their isolation and physical appearance, there had evidently been a degeneration, physically and psychically, from the normal family standard.

Recurring to the reference made to 347 cases, mentioned above, it was stated that in 188 the cause in each was directly traceable to some incident in life of the patient or to a physical deterioration or disease. There was sepsis, loss of body weight, deterioration in the quality and constituents of the blood. The nutrition of the brain was impaired, and while many thousands of

persons suffer in some degree from those conditions and recover, insanity, which is so often only a relative condition, was but a further incident in the cases cited. In other words, insanity, or mental disorder, as in these cases, was acquired. More than 140 recovered. Now, will it be said that they had acquired something they could transmit as an inheritance? If so, what was it? Is there anything material, as a bacillus of insanity, that may be received as an inheritance? That a neurotic temperament may be a heredity is believed to be in accord with common observation. Such, however, is the superstitious, vague sentiment existing in relation to insanity that a fear of contamination is the family skeleton. In relation to the class of cases we are now considering, it is a practice to assure relatives, when recovery does take place, that the probability of a recurrence or of the transmission as an inheritance is no greater than in those persons observed by the physician who have a pneumonia, rheumatism, or fever. Suppose the fact were otherwise, and insanity in some degree was directly transmissible by inheritance, surely man would rapidly deteriorate and degenerate until mental soundness would be of rare occurrence, and in the case of idiots and imbeciles the race would end, as they would cease to procreate.

In the procreation of children, if both parents are of exactly equal potency and not related, the expectancy will be that the physical and psychical characteristics of their children will have a close resemblance to the parents. Thirty-one marriages of parties not known to be related or descendants of relations, produced 207 children. None of the children were reported to have been born with any defect. (Dr. Bemiss.) If the potential power of one parent is less than the other, and this may be the general rule, while the expectancy would be that the offspring would partake of the stronger parent, there is no absolute rule, even here, notwithstanding the probabilities. There is a corrective process in constant operation. That nature, constantly, wholly eliminates or limits the influence of the weaker element is certainly true, as many families show members of very opposite degrees of psychical development. The reverse is also true, that deterioration is sometimes not wholly eradicated, but continues in an increasing degree. Two persons of marked neurotic organization may transmit their temperament to offspring in a more intensified form, and in the second or third generation, if there is no cross by which it may be by chance corrected, a neurotic heredity or predisposition is established, from which may come with slight exciting cause some form of mental degeneration, acute insanity, epilepsy, etc. In-breeding of temperaments, then, rather than consanguineous inbreeding, is more conducive to the development of the neuroses, to escentricity and insanity of the degenerative type.

In the discussion of heredity in its relation to insanity and idiocy an attempt is made to show the diversity of facts and views that exists, that there is often a personal element that enters in the preparation of statistics, that there are limitations of our knowledge; also, to formulate an expression of views or principles which are now presented as conclusions:

1. Physical characteristics, those distinguishing the human species, are transmissible as an inheritance.

2. Knowledge, genius, and culture are not an inheritance, but depend rather on influence, education and environment. Mental receptivity is transmissible. Psychical qualities are not necessarily an inheritance requiring favorable surroundings and circumstances for growth and development.

3. Insanity as a disease is not transmissible by inheritance, but may be acquired or evolved from a neurotic heredity as a basis.

4. A neurotic predisposition is transmissible by inheritance, but there is no absolute rule that it will be transmitted in any given case, or in any case.

5. In-breeding of neurotic temperaments is most conducive to the creation of a neurotic heredity.

6. Idiocy and imbecility may be a defect, having an origin in consanguineous marriages, pre-natal conditions, accidents, arrested development, infantile meningitis, tuberculosis and lack of potency on the part of one of the parents from unexplainable causes.

CLINICAL NOTE ON A CASE OF CALCULUS IMPACTED IN THE URETHRA, WITH GANGRENE AND RUPTURE OF THE URETHRA; EXTENSIVE EXTRAVASATION OF URINE; RETENTION OF URINE FOR NINE DAYS.

Operation by External Urethrotomy, followed by recovery of patient.

By Thomas G. Morton, M. D.

William R., aged 16 years, a well-grown youth, was admitted into the Pennsylvania Hospital, January 2, 1895, with the following history:

Has had irritability of the bladder, and frequent desire to urinate, for a long while, and occasionally noticed a stoppage of the flow while urinating. On December 23, after such an experience, the interruption became permanent. On the 26th, as he was in great distress, he consulted a physician, who found a stone impacted in the penile urethra, about two and a half inches from the meatus. In efforts at extraction, the stone crumbled to pieces, but it was removed, and the patient states that he then passed about a cupful of blood, but did not empty his bladder. A few hours after the operation the penis and scrotum swelled, forming a tumor which became dark-colored in patches. There was absolute retention of urine. His general condition becoming serious, he was brought to the hospital on the ninth day after impaction had occurred.

When admitted into the hospital he was in a condition of shock; he was exceedingly feeble and had septic fever. The penis and scrotum were assuming the form of a dense globular tumor, the size of a large orange; the skin of the penis and scrotum was gangrenous. Before coming to the hospital a surgeon had scarified the surface, but without affording any relief. The bladder was distended to its full extent, and the tumor was the result of extravasation consequent upon rupture of the urethra due to gangrene.

Operation. An incision was made in the median line, extending from the penis, through the scrotum to the perineum, and a large collection of urine was discovered, which formed the tumor. The incision divided the scrotum in the middle and exposed the urethra, which was gangrenous to the extent of about two inches; the spot where it had ruptured was in front of the scrotum, evidently where the stone had lodged. The perineal urethra was then opened and the bladder evacuated. A drainage-tube was slipped into the bladder from the wound, and a tube was also passed from the meatus. After two weeks both the drainage-tubes were removed. The dead tissues soon separated, leaving a healthy granulating wound. The bladder was evacuated daily with a silver catheter, and the further progress of the case to recovery was uneventful. The patient is now presented, a month after the operation, with the wound in a healing condition, with the large urethral fistula still open.

The repair of that portion of the urethra which was destroyed may necessitate a plastic operation, especially if it should be found that, in the process of cicatrization, contraction and deformity of the organ is likely to occur.

DISCUSSION.

Dr. Morton: This case is presented partly on account of the unusual character of the accident, but more especially in regard to the length of time absolute retention existed without bladder rupture.

In regard to the closure of the fistula it would seem prudent to wait until the repair now progressing shall show what form of operation may be required.

Read at the Philadelphia Academy of Surgery, February, 1895.

Dr. John H. Packard: The only thing to do is to make a perineal section in the membranous portion of the urethra, and keep the anterior portion completely at rest. When repair has gone as far as it will, then an after-operation can be considered.

Dr. Willard: The case reminds me of one I saw 15 or 20 years ago. The man, after gonorrhea, had a stricture, and he was in the habit of catheterizing himself. One day urination ceased and retention occurred, as he thought, from the stricture. I first saw him on the fourth day of this condition. At this time the scrotum was gangrenous. The whole anterior portion sloughed off and both testicles were bare. Rupture of the urethra had occurred in the prostatic portion, where a stone had lodged, blocking the urethra and causing gangrene. I treated the case by incision in the perineum and scrotum, removing the stones. The wound healed slowly, but without difficulty, and the man lived several years afterward. The incision in that case was two or three inches in length, but did not extend as far forward as in Dr. Morton's case.

Dr. W. W. Keen: The most interesting question here is the restoration of the urethra. Two cases that occurred in my practice some years ago have some bearing upon this. One was a patient in the country, who received an injury of his perineum as the result of jumping and coming down upon the sharp corner of a board, which penetrated the perineum to the depth of two or three inches to the prostate and completely lacerated the urethra. He was brought in from the country, and I saw him on the third day. No urine had been passed. I attempted to make a perineal section, but the tissues were sloughing and there was profuse bleeding, so that the tissues could not be recognized. I, therefore, gave up the perineal incision, put him in the Trendelenburg position, and opened the bladder above the pubes. I then performed retrograde catheterization. In performing the perineal operation I had tied a large mass of bleeding tissue, and discovered on making retrograde catheterization that I had included the corpus spongiosum and the urethra in the ligature. I cut the ligature and introduced a silver catheter, and kept it in the urethra for six weeks; the granulation tissue grew around the catheter and restored the urethra completely. Subsequently, by gradual dilatation, I increased the calibre to No. 30, and kept it at this by occasional dilatation, by the sound.

The second case occurred two years ago last summer. A man, in vaulting on his bicycle, missed his aim and landed upon his wheel. He ruptured his urethra without breaking the skin. There was complete retention, and I began a perineal section. After a long search for the urethra I was about to give it up and do a suprapubic operation, when I succeeded in finding the urethra. I left a catheter in for several weeks, and succeeded in re-establishing the calibre of the urethra as in the former patient. It is possible that the same thing might be done here. If the silver catheter is left in place the granulation-tissue might spring up around it and obviate the necessity of a plastic operation. At all events, it would make a subsequent operation less extensive.

Dr. Packard: About 15 years ago a boy was brought into the Pennsylvania Hospital, who had fallen across a board and caused rupture of the urethra very close to the bladder. In that case there was no sloughing, simply a rupture at the neck of the bladder, just within the sphincter. He was brought in from the country, and attempts had been made to pass the catheter, but without success. I had him put in the lithotomy position, and made a perineal section. I was in hope of finding the vesical extremity of the urethra, but that was not possible, and I therefore resorted to the same expedient as that which Dr. Keen has spoken of. I performed suprapubic section and retrograde catheterization. I succeeded in passing a soft instrument through from the penis, and I had no further trouble, and the patient made a good recovery.

Dr. Henry R. Wharton: I recall

having seen four cases of impacted urethral calculus. The first was a boy four or five years of age, under the care of Dr. Lenox Hodge, at the Children's Hospital in this city. He was brought in several days after impaction occurred, and sloughing and urinary infiltration existed. He died in the course of a few days after operation, and it was found at the autopsy that he had typical surgical kidneys. The next case was a child five or six years of age, a patient of Dr. Samuel Ashhurst, in which I helped him operate. The impaction had only existed for 24 hours, and there was no gangrene and no rupture of the urethra. It was found impossible to remove the calculus through the meatus, and an incision was made just behind the stone, and it was taken out. A couple of stitches were used to bring the wound together, but they did not hold well, and the wound healed eventually by granulations. The next case was a man who was brought into the Presbyterian Hospital with retention of urine for 24 hours. He had a stone in the urethra at the peno-scrotal junction. I succeeded in grasping the stone with forceps introduced into the urethra, and removed the calculus without difficulty; the patient recovered. The last case was one seen with Dr. Dick; it was a boy four years of age. Retention of the urine had existed for 24 hours. I went prepared to operate, but just before I reached the house I was informed that he had passed the stone, which I now present, and there was no further trouble. In all the cases I have seen the impaction has occurred at the junction of the penis with the scrotum, which seems a favorite place for the stone to be arrested in its passage. With regard to the subsequent treatment of the case shown by Dr. Morton, it appears to me to be better to wait to see how much will remain after cicatrization is complete. In such a case I would make a perineal section before attempting to reconstruct the urethra. The condition is more favorable than hypospadias, because a considerable part of the anterior urethra is present.

The Times and Register.

A Weekly Journal of Medicine and Surgery.

FRANK S. PARSONS, M. D.,
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Subscription Price, - - - $1.00 Per Year.

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Communications are invited from all parts of the world. Original articles are only accepted when sent solely to this Journal. Abstracts, clinical lectures, or memoranda, prescriptions, news and items of interest to the medical profession are earnestly solicited.

Address all communications to

Room 718, Betz Building.

Entered at the Philadelphia Post Office as second-class mail matter.

PHILADELPHIA, APRIL 13, 1895.

DIPHTHERIA ANTITOXINE ACCIDENTS.

Some recent appalling accidents have followed the injection of diphtheria antitoxine, but, when carefully analyzed, may not mean more than results occasionally observed in the employment of other new methods of treatment.

It always follows the introduction of new remedies that, owing to physicians being unaccustomed to the use of them, some accidents happen, or, on account of individual susceptibilities and advanced stages of disease before the new remedy is tried, a fatal result sometimes suddenly follows.

It is just as well in the present condition of the antitoxine furor to be on the conservative side. We trust all physicians wil lstand in a position of willingness to be convinced of its effectiveness, hopeful that we have an able remedy for diphtheria, but, while ready to experiment carefully, will not be too sanguine of specific effects.

It is well to remember right here that there have been other specifics, so-called, for this disease, which have uniformly and justly been relegated to the positon of obscurity after the craze was over.

In the New York Academy of Medicine, last Thursday, an animated discussion is reported to have taken place between Dr. Joseph Winters and others, in which the former is said to have made an emphatic attack on antitoxine, based on the results of 150 cases in which the remedy was used in the Willard Parker Hospital, of that city. He stated that the statistics used in the paper read included many cases of simple tonsilitis and normal throats, the latter having been supposed to be subjected to the influence of diphtheria. He stated that every case of throat affection which was sent to the Board of Health for diagnosis was invariably returned as "diptheria," whether it was a case of simple tonsilitis or some other difficulty. There is in New York a divided opinion among the profession for and against the antitoxine treatment.

All this is unfortunate, but may be the result of too hasty conclusions. Dr. Winters said that he had failed to see any improvement in any cases of septic diphtheria, and the others would recover without serum treatment with proper care, sometimes without any treatment.

Dr. Biggs, of the Health Board, who read the statistic paper of the Willard Parker Hospital, in closing the discussion made a bitter speech in which he said that many of Dr. Winters' statements were untrue, and laid the reduced mortality this year from diphtheria to the result of the new treatment. No cases were sent to the hospital as diphtheria which were not so reported to the Board of Health by practicing physicians as such. The meeting broke up amid great excitement at nearly midnight.

Regarding the case of Bertha Valentine, who died in 10 minutes at Brooklyn, after an injection of antitoxine, there seems to be no doubt but that the fault lies outside of the remedy. The serum from the same lot as used in this case was tried on guinea pigs and the animals suffered no inconvenience whatever from the injections. The possibility of air being injected at the same time does seem to exist, but no more so than might occur from a similar injection of morphine or other drug. We can hardly conceive a physician being so ignorant of the usual rules of making injections as not to exclude all air from his syringe before operating.

Summing all the facts at the present time it seems that while there is considerable evidence that the serum treatment of diphtheria does not produce certain curative effects in all cases, we should still remain open to further proof of its inefficiency before we are willing to give up the hope of its specific effect. We further believe that the quality of the antitoxine should be vouched for, and obtained from good, reliable houses.

ACCESSORY MECHANICAL SUPPORTS AS THERAPEUTIC ADJUVANTS.

The ingenuity of man, combined with the advances in the arts, of late years, has vastly expanded the field of mechanical therapy. Its range of adaptability is an ever-widening one, and by its appropriate utilization we may yet realize astounding results. We will, at present, ask attention only to the great value of the simpler contrivances, which are inexpensive and are always accessible, viz.: The bandage, the binder and the chest-girth, or more properly speaking, the Murphy Corset.

It is needless to speak of the great value of the bandage as a supporter and protector when skillfully applied, nor should there be any diversity of opinion in the use of the binder after confinement, which gives support and secures rest to the overstrained abdominal muscles; besides, aids in overcoming that tendency to ventral bulging from muscular inertia, occasionally seen in the matron who has borne many children. But one of the most useful contrivances, for its cheapness and simplicity, that has been given to the

profession in many years is a sort of a waist-shaped binder, for mammary compression, in those cases in which the gland is painful or threatened with inflammation, or in those cases wherein it is desirable to suppress the secretion of milk, after delivery.

The principle of action is uniform compression of the large vessels against the underlying costal shafts, for after it is applied turgescence perceptibly disappears, and the breast promptly becomes limp, pliable and painless. This device may be utilized with great advantage for retentive purposes or dressings in any surgical operation on the chest walls, in cases of amputation of the breast or in fractures of any of the ribs.

Miss Murphy, the chief nurse of the New York Maternity, is the inventor of this most admirable adjustment; like Madame La Chapelle's numerous valuable contributions in her maternity work, this demonstrates that if we are to permit the "gentler sex" to compete with us, we must put more energy into our work, for with equal opportunities the ladies will in the future, no doubt, press us closely in the race for advanced position. To appreciate the great value of the Murphy Corset we advise our readers to give it an early trial.

CUT THEM DOWN, WRITE BRIEFLY AND CONDENSE FACTS.

Is it not a rational question that we should ask, "Cannot the average writer or speaker make an effort to express his views, or impress his arguments within a limited compass?"

Sometimes we come across a contribution, or the report of a clinical lecture, which contains amidst a mass of excessive verbiage under which there are obscured a few valuable grains of information or knowledge. In some instances it would appear that the writer was under an impression that as long as he restricted himself to the rules of rhetoric and grammar, he had a license to amplify indefinitely, or that he was writing for a prize for the production of an essay that would contain the most words and the least ideas. And, with some lecturers, not of an inferior order either, let it be understood, we would imagine that they were speaking against time, or that a "long-winded," cumbersome description was an essential part of an address. Sometimes, the high position of the speaker may permit of this practice, but there is such a thing as a limitation to human endurance.

"He was so full of his subject," said a spectator, of a well-known surgeon, "that while he was cutting up and ligating the internal-iliac, he incessantly talked science, and his tongue went faster than his hand."

Another will open an essay with such a lengthy introduction that the reader may become weary before the real pith and core of the subject is directly taken up.

Clearness and brevity, with a concentration of expression, are what give a subject real strength and value.

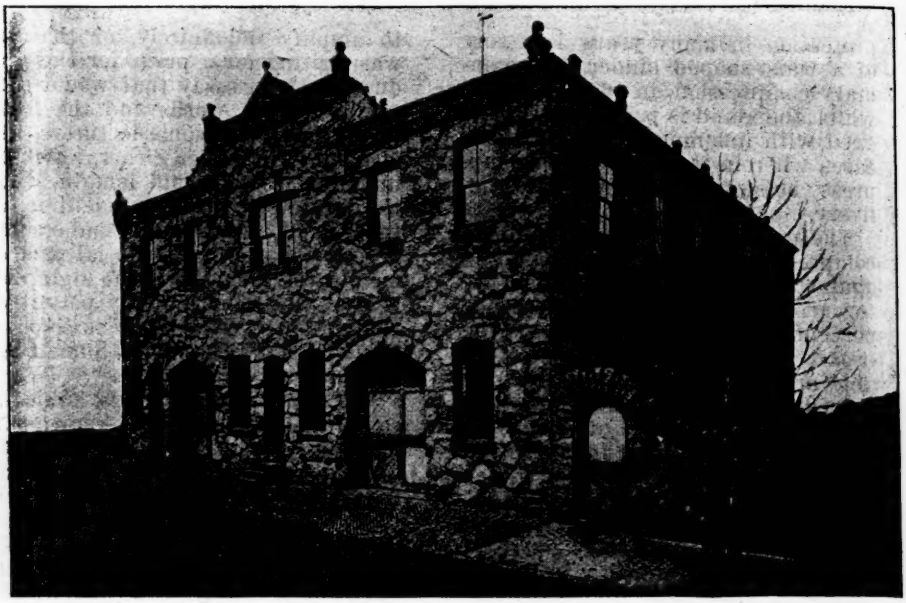
It is true that too much compression is not compatible with the detail of description needed in deductive instruction, but, in the average dissertation, such fullness rather weakens than imparts that vigor and perspicuity which are so essential to real worth and indelible impression.

OPENING OF THE BIOLOGICAL LABORATORY OF THE H. K. MULFORD COMPANY.

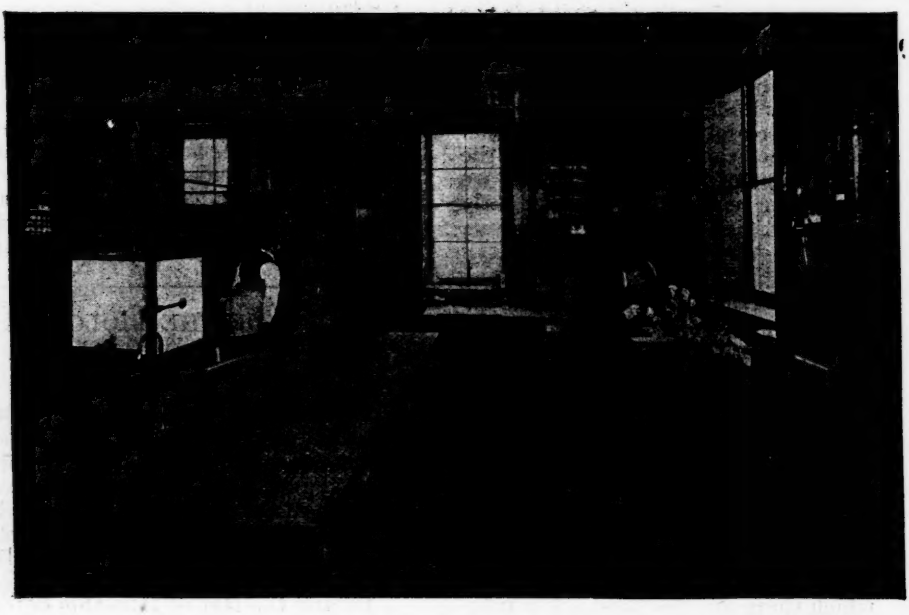
Through the kind invitation of the H. K. Mulford Company the physicians of Philadelphia and other invited guests assembled on Wednesday, April 3, to inspect the new laboratory, for the manufacture of diphtheria antitoxine, recently established by them.

During the last of 1894 this enterprising firm secured the services of Dr. Joseph McFarland and Dr. Leonard Pearson, of the University of Pennsylvania, to prepare a reliable diphtheria antitoxine.

Great care has been used and no

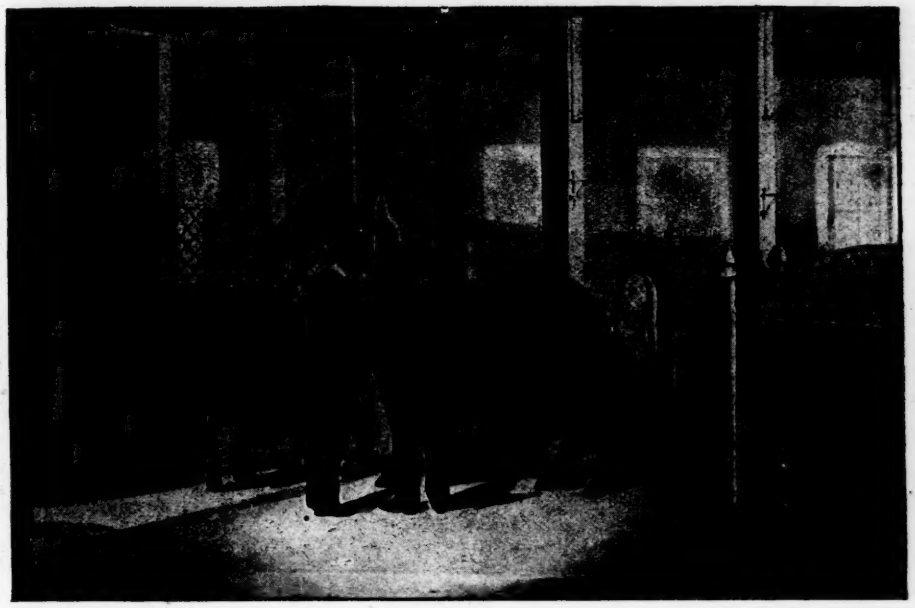


Biological Department Biological Laboratory H. K. Mulford Company

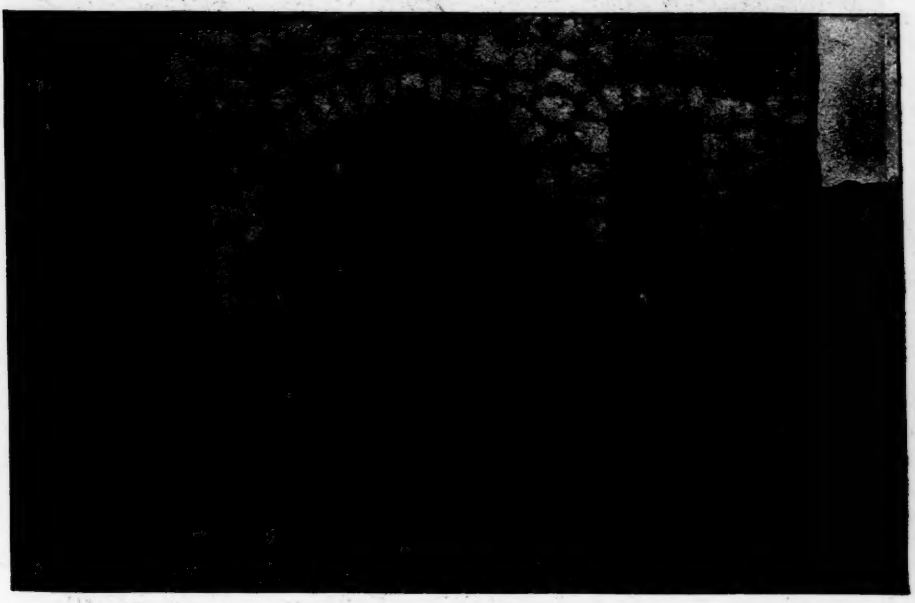


Biological Department Bacetriological Laboratory H. K. Mulford Company

undue haste in the preparation of this product. The laboratory, which is freely opened to inspection, has every facility for the cultivation of reliable products. Every precaution is taken in the manufacture, and no



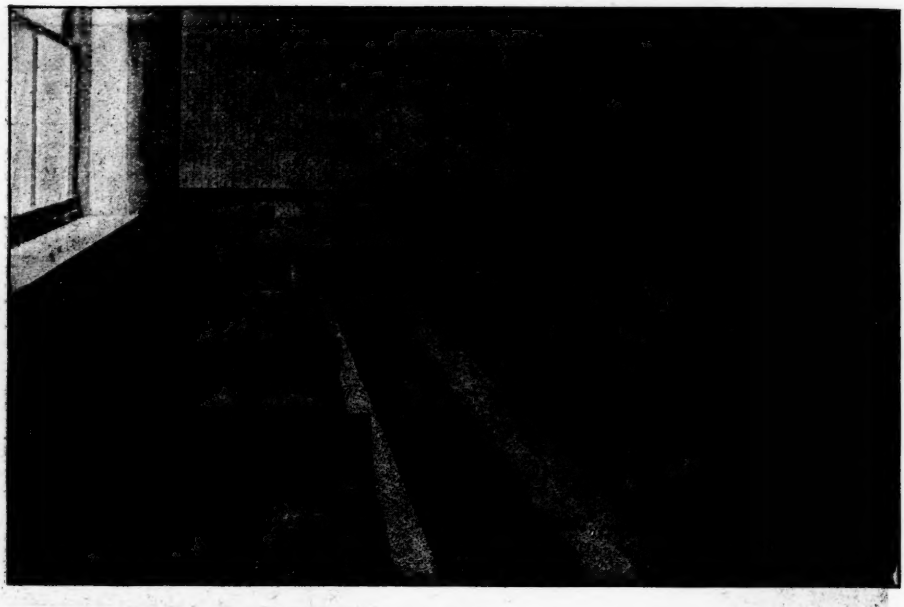
Biological Department — Injecting the Toxin — H. K. Mulford Company



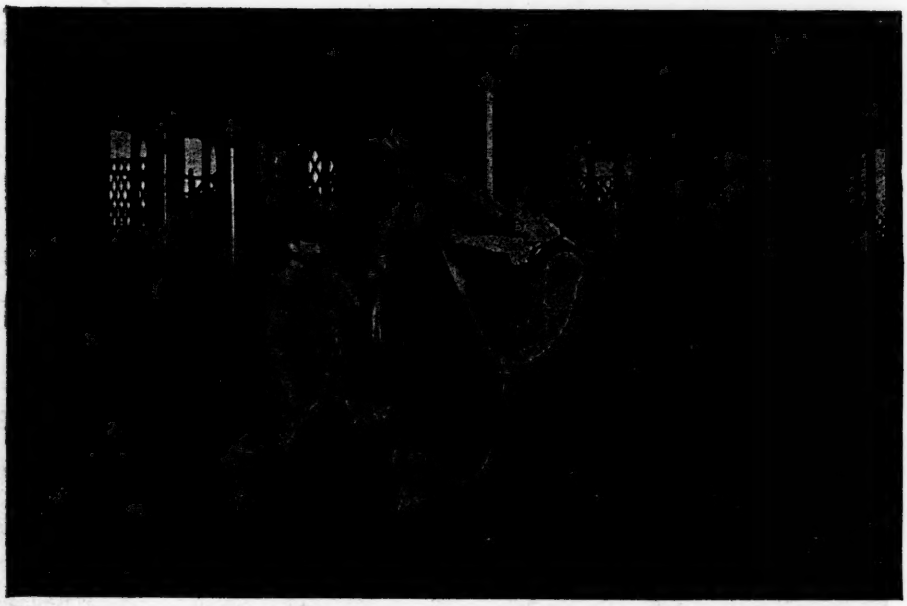
From Biological Department — Horses Immunized against Diphtheria Toxin — H. K. Mulford Company

product is allowed to go out without having been thoroughly tested as to strength and quality.

The horses used are fine healthy looking animals and thoroughly tested before immunization is begun.



Biological Department Animal Room H. K. Mulford Company



Biological Department Drawing Blood from Immunized Horse H. K. Mulford Company

The application of the serum naturally varies, according to the purposes for which it is employed, whether for immunization or cure, as well as the age, body weight and stage of the disease. But one

strength of the antitoxine is manufactured which is prepared by grading the product, obtained from the immunization process, by adding more serum if the antitoxine is too strong, or vice versa, if it is too weak. The strengths of the various antitoxines differ according to the brand and are expressed in what are known as immunity units. An immunity unit is the amount of serum required to save a five hundred gramme guinea pig from the minimum fatal dose of the diphtheria toxine. One cc. of the diphtheria antitoxic serum, prepared by this company, protects 50,000 grammes of guinea pig and contains 100 immunity units, which would protect an individual weighing 100 times as much as a guinea pig (about 120 pounds), if the susceptibility were the same. As the susceptibility is not the same the exact number of immunity units required for each administration must be based upon the results of clinical experience, which shows that about 10 times as much of the antitoxine is required by the human species, in proportion to the body weight, as is required by the guinea pig. The number of units in each bottle of antitoxine as well as the date of each marketed product is fully displayed on the label.

The whole process is exceedingly interesting and shows a great amount of perseverance and care to produce a reliable diphtheria antitoxic serum which we trust will meet every requirement and success which this new remedy is capable of. Certainly no better facilities for a reliable product can be had and no more faithful, conscientious work has been given than displayed by the manufacturers in this laboratory.

THE PASSING OF THE "AMERICAN LANCET."

With the issue of the American Lancet for the current month, Dr. Leartus Connor, after a service of nearly 24 years, retires from the editorial chair, and with his withdrawal the publication of the Lancet comes to an end.

Book Reviews.

SUGGESTIVE THERAPEUTICS IN PSYCHOPATHIA SEXUALIS; WITH ESPECIAL REFERENCE TO CONTRARY SEXUAL INSTINCT. By Dr. A. Von Schrenck-Notzing, Munich, Germany. Authorized translation from the German by Charles Gilbert Chaddock, M. D., St. Louis. One volume, royal octavo, 325 pages. Extra cloth, $2.50 net; sheep, $3.50 net. Sold only by subscription to the medical profession exclusively. Philadelphia: The F. A. Davis Company, Publishers, 1916 Cherry street.

This volume consists of about 300 pages, divided as follows:

Section 1. Sexual hyperesthesia, which is treated of under three chapters, the first embracing onanism satyriasis and nymphomania, in their various manifestations, the second describes their treatment by "suggestion," while the third is made up of cases illustrative of the disease.

Section 2. Includes sexual impotence and anesthesia, subdivided into chapters on pathology, treatment and cases.

Section 3 is devoted to sexual paraesthesia describing the varieties of sexual perversion, with a history of its development in ancient times, and the influence of heredity and education on the same, together with chapters on diagnosis, prognosis and treatment illustrated as in the previous sections by case histories.

The whole subject of anomalous sexual functions is an extensive and important one from a medico-legal point of view. Every few days the newspapers chronicle crimes depending on disorder or diseases traceable to the centres governing the sexual function. The work is, of course, written in a scientific manner, and intended for the profession, and whilst it is a valuable contribution to knowledge still to one unacquaint-

ed with the literature on the subject it is somewhat startling, since it shows up a phase of human nature which in a moral sense is very degraded. In some respect the method of treatment might be open to criticism. Thus, as a therapeutic measure in the treatment of these cases prostitution is not condemned "as in the present state of society, many individuals cannot afford marriage, and it is senseless to oppose nonmarital intercourse, and to insist on absolute continence;" also, "the idea of complete health includes the complete and regular satisfaction of all the needs of man and that is the goal for which hygiene must strive, and not seek to stifle one of the most important functions of the organism." But as the book was written with the purpose of relieving a form of psychical disorder, which, although not always recognized, is nevertheless a frequent cause of hopeless insanity, as a means to prevent which infraction of the code of morals is of little consequence.

The author considers that the minimum of evil can only be obtained by education of the young; that a real sexual education is as important or perhaps more so than any other branch of knowledge, "since it would remove the foundation on which rests onanism and perversion of the sexual instincts." Such means would be more efficient than police regulations, which can always be evaded. As he mentions, "whole libraries have been written on nutrition and diet, while an equally important function is so far neglected that scarcely a work on a strictly physiological basis can be found."

The treatment rests on hygiene, genito-urinary sedatives and, above all, as the trouble is generally due to diseased imagination, methods which will act directly on that, such as hypnotic suggestion, afford the best hope of cure.

The book will be valuable to those interested in legal medicine; and also those who are anxious for the abolition of views which have debased humanity from time immemorial. The treatment indicated is necessarily limited to those skilled in hypnotic methods. E. W. B.

BOOKS AND PAMPHLETS RECEIVED.

SONDERABDRUCK AUS DER ALLEGEMEINEN MEDICINISCHEN CENTRAL-ZEITUNG.

REPORT OF A CASE OF PATHOLOGICAL SEPARATION OF THE LOWER EPIPHYSIS OF THE FEMUR. By A. H. Meisenbach, M. D., St. Louis. Reprinted from Annals of Surgery, February, 1895.

EARLY DIAGNOSIS OF CANCER OF THE UTERUS. By Edwin Ricketts, M. D., Cincinnati.

CHLOROFORM IN LABOR* By Edwin Ricketts, M. D., of Cincinnati, O. Reprinted from Virginia Medical Monthly, February, 1895.

EIGHTEENTH ANNUAL REPORT OF THE BOARD OF HEALTH OF THE STATE OF NEW JERSEY, AND REPORT OF THE BUREAU OF VITAL STATISTICS. 1894.

REPORT OF THE BOARD OF HEALTH OF THE CITY OF READING. For the year 1894.

A TREATISE ON THE WINE OF COD LIVER OIL WITH PEPTONATE OF IRON. Originated and manufactured by Frederick Stearns & Co., Manufacturing Pharmacists, Detroit, Mich.

INFECTION AND IMMUNITY WITH SPECIAL REFERENCE TO THE NEW DIPHTHERIA ANTITOXINE. By Charles Russell Bardeen, B. A., Assistant in Histology, Johns Hopkins University. Reprinted from the School Bulletin, Syracuse, N. Y. C. W. Bardeen, Publisher, 1895.

MALTINE WITH COCOA WINE. Thirty-six page pamphlet issued by The Maltine Company, New York.

E. MERCK DARMSTADT. Annual Report on the year 1894. Published in March, 1895.

THE EXTERNAL AND INTERNAL USE OF GUAIACOL, WITH BRIEF REPORTS OF CASES. By J. M. Anders, M. D., Ph. D. Reprinted from the Therapeutic Gazette, March 15, 1895.

SEASONAL INFLUENCES IN ERYSIPELAS WITH STATISTICS. By J. M. Anders, M. D., Ph. D., Professor of Medicine and

Clinical Medicine, Medico-Chirurgical College, Philadelphia. Reprinted from the transactions of the American Climatological Association, 1893.

PROCEEDINGS OF THE SANITARY CONVENTION HELD AT UNION CITY, OCTOBER 25 AND 26, 1894. Supplement to the Report of the Michigan State Board of Health for the year 1895.

TWENTIETH ANNUAL REPORT OF THE SECRETARY OF THE STATE BOARD OF HEALTH OF THE STATE OF MICHIGAN, FOR THE FISCAL YEAR ENDING JUNE 30, 1892.

NINTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH AND VITAL STATISTICS OF THE COMMONWEALTH OF PENNSYLVANIA.

ANNUAL REPORT OF THE COMPTROLLER OF THE CURRENCY TO THE THIRD SESSION OF THE FIFTY-THIRD CONGRESS OF THE UNITED STATES. December 3, 1894.

Electro-Therapeutics.

IN CHARGE OF
DR. S. H. MONELL, New York.

A SHORT STUDY OF FARADISM.

The "Short Study of Galvanism," last published in this column, will now be followed by a similar consideration of the currents derived from induction coils. Faradic batteries, both those of early make and of recent but coarse structure, have been greatly discredited in therapeutic work. Experiments with new apparatus producing a sinusoidal form of current, and with currents of high potential and varying degrees of frequency derived from improved static machines through transformers and condensers, have necessitated further development of the common Faradic apparatus to save it from being discarded altogether. It is plain that if the cheaper and more convenient portable battery can be made to furnish currents which approach in quality and value those of the more expensive devices that the usefulness of the Faradic battery will be greatly increased.

Leading makers have already put high-grade Faradic apparatus on the market and the nearer they come to equalling the newer alternators, etc., the better they are.

While the older and cheaper batteries remained mere crude, mechanical affairs without any semblance of scientific refinement the Faradic current was used almost wholly to cause coarse muscular contractions. It was not fit for much else. As coils, interrupters and current controllers have been developed into a high state of efficiency the therapeutic range of the resulting currents has been correspondingly developed.

Such an induction apparatus as that recently made for me by the Jerome Kidder Manufacturing Company, of New York, represents the fullest efficiency so far attained, and furnished effects most nearly allied to those of the static induced and sinusoidal currents.

Coarse currents of Faradic coils are graphically represented by wave tracings, but the finer currents from coils of long, fine wire cannot be so traced.

The vacuum tube furnishes a better test of the smoothness, equality and character of the higher tension currents. The faradic make and break currents are so unlike as to produce nearly the effect of an interrupted current flowing in one direction, instead of the effect of an alternating current.

When electrodes of equal size are applied to muscles, with the same E. M. F., the negative pole will be found to produce very much the greatest stimulation. For all practical purposes we may discard the old fiction that the faradic poles are alike, and that it makes no difference which pole is employed. It may make no difference with the trumpery affairs sold as family batteries, but it makes a great deal of difference with a proper scientific apparatus, manipulated by an expert. Polar effects are alike in true alternating currents with equal make and break, but the faradic induction coil does not produce such a current, nor do

we wish it to do so, as it is a decided advantage to have the variety we now secure with unequal poles.

It is difficult to deal exactly with the subject of the physiological effects of the induction coil current because the variations in effect shift with kaleidoscopic swiftness with every change in the devices through which the current is passed on its way from the primary cell to the patient. In this respect there is a marked difference between the galvanic and faradic switch boards. One may be very simple, while the other is necessarily as complicated as the conditions of the case require. The galvanic current may be considered as the natural flow of an electric stream, doing its work because of its inherent qualities and powers, while faradic currents are artificial, produced and modified by mechanical contrivances, and do their work chiefly because of their mechanical energy. The galvanic stream is a marvel, a miracle, a mystery of subtle, silent force; the faradic energy is ingenious and valuable, but it is not an awe-inspiring, wonder-working subtle activity.

Nearly the whole influence of faradic currents within the tissue results from the contracting effect upon muscular fibres. It is indefinite to speak of the effects of the "faradic current" or of "faradism," but in what follows the reader must consider that many modifications of current strength and length and frequency of periods are required to produce the complicated results described. With a high-grade apparatus it is as if we were dealing with a score of separate currents instead of a single one. Let us now note the main points of action with secondary coils.

A copper wire of large calibre will conduct a much larger dose of electricity to the patient than a wire of fine cross section. A short wire offers less resistance than a long one of the same diameter. These facts enable manufacturers to make coils for medical use that, with a given E. M. F., will produce a variety of dosage —small, medium and large—as may be desired. By also employing E. M. F. of adjustable voltage, from zero to the maximum required, and by interrupting the current at various rates of speed, we can stimulate or soothe; can produce intermittent muscular contraction or physiological tetanus; can allay or cause pain; combat congestion and even inflammation; can reduce hyperplasia, relieve a contusion, increase wasted or non-developed muscular structure; tranquilize the nervous and circulatory systems, increase peristalsis, promote nutrition and hasten absorption, etc.

It is generally supposed that powerful muscular contractions produced by faradism are painful. This is only partly true. Contractions with ordinary induction coils, or the static induced or any other form of electrical application are painful if coarse coils, large Leyden jars, etc., are used with an E. M. F. that exceeds tolerance.

A long, fine wire coil, producing a true high tension faradic current, will be as painless as the small jar static induced. Such a faradic current may be slowly interrupted, say 40 times a minute, and the E. M. F. may be great enough to cause contractions of the arm muscles from the hands to the shoulder with perfect comfort to the patient and no sense of pain whatever. I regard this current, as produced by the battery designed by me, as the nearest approach to the static induced current (small jars) we possess.

It may be stated in general that the shorter, coarser wire coils of improved faradic batteries are used mainly for muscular effects. They would also be used for recent injuries asociated with venous distension. With the coarse coil a slow rate of interruption is also generally employed, the use of the rapid vibrator being usually confined to the medium and long coils. It is these which produce the currents of higher tension which effect nerve sedation, allay pain and combat congestive and inflammatory processes, and which have revolutionized the uses of faradic electricity.

As external applications are familiar to most physicians who employ faradism at all, I will pass at once to the effects of applications to mucous surfaces. Owing to lack of sensitive nerves and to the very much greater conductivity of moist, soft, mucous tissues a given current produces far less pain than when applied to the tough, resisting skin. Not only is a greater degree of tolerance present but larger doses are employed than in other lines of treatment. Referring especially to applications within the vagina, the coarse coils and slow vibrator may be used to develop an infantile uterus, stimulate functional activity, lessen subinvolution, impart tone to weakened muscles in cases of prolapse, etc.

While the longer coils are referred to as sedative, yet a mild and painless stimulating effect may be secured at will from even the longest and finest coil employed by simply swelling the current or by decreasing the frequency of the periods, or by steadily holding the E. M. F. up to full tolerance and making the treatment short. In a general way stimulating applications should be given less often and for shorter seances than sedative ones, for we can over-stimulate, but we run no risk of producing too much sedation in an irritated part. To secure the nearest approach to local anesthesia that we can get we use the rapidly interrupted, smooth, fine current from one of the longer, or the longest coil, according to the state of irritability we are to treat. The positive pole is placed nearest the seat of pain, and the negative should be on a neutral point so situated that the current and blood flow will harmonize in direction. With a bipolar electrode the positive is placed at the tip. The current should be slowly and gradually increased so that no distress will be caused. When up to the limit of comfortable tolerance let it remain until it becomes barely perceptible, or say 15 minutes. Then reduce the dose to the point where sensation ceases and close the sitting in five minutes. The exact rule as to time of seance must, however, be governed by the effect. In some cases an hour may be required to secure the utmost benefit, in an acute and painful condition.

Apart from local polar effects there results from the gynecological applications as well as from the more general methods of faradization a marked gain in nutritive processes. Cases of anemia are notably improved by bipolar faradization of the pelvic organs.

S. H. MONELL, M. D.

Ophthalmology.

IN CHARGE OF

DR. J. A. TENNEY, Boston, Mass.

THE SALICYLATE OF SODIUM IN EXOPHTHALMIC GOITRE.

Dr. Chibret reports in the Revue Generale d'Ophthalmologie four cases of exophthalmic goitre, that were treated successfully with sodium salicylate.

The first was a lady of 44 years of age, who had a high degree of exophthalmos goitre and tachycardia. The salicylate of sodium was given in doses of 20 grains four times a day. In four days there was considerable improvement, which persisted.

A man 42 years of age also had the triad of symptoms, and was given a similar dose. The action of the heart was so violent as to prevent his taking exercise, and made it almost impossible for him to sleep. Slow walking brought on asphyxia and profuse sweats. He resumed his farm labors at the end of one month.

A lady 31 years of age had exophthalmos and tachycardia, but slight goitre. Improved in three days. If the remedy was discontinued the symptoms invariably returned. She was able to leave off the salicylate in one year.

Another lady, 40 years old, had the three symptoms. Her condition was improved at once. She recovered, in spite of a life of worry, that is liable to aggravate the disease.

Dr. Chibret was led to use this remedy because the disease appeared to him to resemble gout in its progressive attacks and periods of quiet, and because he sometimes found a

history of arthritis in this class of patients. He has found better results following the use of this remedy than he has ever seen follow it in arthritic disorders.

He gives the salicylate in a pint of fluid. He then finds that the patient bears it well, even in cases of intolerance. If the patient threatens to abandon its use he would reduce the dose to one-half or less. In doses of 10 grains he has never seen any intolerance.

TUMOR OF THE OPTIC THALAMUS.

At the meeting of the New York Neurological Society in January Dr. Edward D. Fisher described a case of headache, followed by progressive paralysis and death.

The patient was a woman, 25 years of age, who had always had good health. The family history was negative. She first complained of severe headaches in April, 1894. The eyes were examined, but no changes were discovered. The pain, which was excessive, was located on the right side and posteriorly. The patient was somewhat stupid. The thyroid gland was enlarged on the right side, the left hand and arm were weak, and there was marked ataxia. The speech was not affected. Sensation to pain was diminished, and she was unable to distinguish between heat and cold. There was no vomiting and no convulsions, and the pulse and temperature were normal.

On July 21, 1894, Dr. Fisher found marked paresis of the left side. The patient appeared to be hysterical. There was dragging of the foot in walking. The headache and the stupor increased and the vision began to fail. August 31 Dr. Carl Koller examined the eyes, and found left hemianopsia and papillitis, with paralysis of the left abducens muscle. A diagnosis was then made of tumor at the base of the brain, involving the right crura cerebri above the third nerve, and compressing the right optic tract.

On September 12 blindness was complete, with optic atrophy. The diagnosis of tumor in the optic thalamus was then made. The patient went into a comatose state, and died September 16. The autopsy revealed a glioma in the right optic thalamus, compressing the optic tract by its extension downward.

Medicine.

IN CHARGE OF

DR. E. W. BING, Chester, Pa.

SERUM TREATMENT OF DIPHTHERIA.

Vierordt (Deut. med. Woch., March 14, 1895) has treated 75 cases with Behring's serum. In 61 cases Loeffler's bacillus was found, and to this number two other cases must be added, as other children in the same house suffered from diphtheria, bacteriologically proved. From these 63 cases eight are deducted either as being moribund on admission or owing to some additional lesion being found after death. The mortality was then found to be 14 per cent., as against 67 to 37 per cent. in the preceding six years. If the moribund cases were added the mortality would be 25 per cent. Among those not tracheotomized the mortality was 2.7 per cent., and among the tracheotomized 46 per cent., the latter number not being more favorable than hitherto. Of the 24 cases admitted with the larynx intact only one died, and, indeed, only one of these cases developed the barking cough. Of five admitted with a croupy cough and hoarseness one died. Of 23 cases admitted with stridor and retraction of the soft parts 13 were tracheotomized; in nine of these 23 cases the symptoms of obstruction passed off without tracheotomy in 18 to 48 hours, a fact hitherto not within the author's experience. Early treatment did not always prevent a fatal issue. The cases did not appear slighter, but even, perhaps, more serious than usual (37 belonged to the severe or very severe group). No noticeable changes were seen in the membrane after the injection. The absence of spread to the larynx was

remarkable. In short, a number of very severe, even desperate, cases recovered. A favorable action on the heart's action was noted. Albuminuria seemed to play a smaller part than hitherto. Paralysis of the palate was noted frequently, but no extension occurred. The author has never seen a rapid fall of temperature after the injection. A rash was noted 15 times. A relapse occurred five times. The author concludes that no remote harmful effect was produced by the serum. Although these cases provide no absolute scientific proof, Vierordt is more and more inclined to believe in the specific action of the serum. Its use is imperative. Cases should be treated without waiting for bacteriological proof. Less than 1000 units should be rarely used in slight cases in the young, and should be repeated in severer cases within 24 to 48 hours. The author draws attention to the rigid character of the osbervations which should be made upon cases treated with the serum. It must be some time before the value of the method can be absolutely proved.

ICHTHYOL IN THE TREATMENT OF TUBERCULOSIS.

At a meeting of the Royal Academy of Turin on March 8, Scarpa (Gazz. degli Osped. e delle Cliniche, March 16) communicated the results obtained in 150 cases of pulmonary phthisis treated with ichthyol between April, 1894, and January, 1895. Having referred to the favorable results of the treatment reported by Cohn, of Hamburg, in 100 cases of the same disease, the author pointed out that from what was known of the action of ichthyol as an astringent of the vascular system, as an antiseptic, as a disinfectant of the digestive apparatus, and as an ailment d'epargne it was a priori presumable that it would be useful in phthisis. He employed the drug in the purest possible state, dissolved in the proportion of one-third in distilled water or any suitable vehicle. Of this solution he gave from 20 to 180 or 200 drops, dissolved in water, in the course of the day. The remedy was in all cases well borne. No other treatment was employed beyond attention to the hygienic environment and feeding up. Of the 150 cases 23 died; all these were in a desperate condition before the treatment was begun; but even in them the ichthyol appeared to do good. Of the remaining cases 17 were apparently cured; in 50 there was notable improvement; in 32 there was some improvement; in 28, up to the date of report, the treatment had produced no effect. The good effect of the ichthyol shows itself first in the influence which it has on the symptoms produced by the local lesions—cough, expectoration, dyspnea—afterward on the general condition. Physical examination shows profound modifications in the lesions, especially in the circumscribed infiltrations of the early stage, but also not infrequently those of the breaking-down stage. The author does not attempt to decide whether the ichthyol acts only by improving nutrition or also by direct action on the lesions, or by neutralizing the toxins produced by micro-organisms—both Koch's bacillus and the staphylococci, etc., which are the causes of secondary infections. He insists on the advantages which ichthyol presents over guaiacol in the treatment of tuberculosis.

THE EFFECT OF SERUM INJECTIONS ON THE TEMPERATURE AND PULSE.

Variot (Sem. Med., March 6) has studied this question. All children under suspicion of diphtheria who are admitted into the Trousseau Hospital receive, as soon as they come in, an injection of 20 c.cm, of diphtheria antitoxin. This practice has given the author the opportunity of observing in the children who do not develop diphtheria the physiological effects of the serum injections. His observations show that they cause a rise of temperature of from one-half degree to 1 degree C., sometimes more. At the same time the heart's action is quickened and the pulse beat becomes more frequent. These

phenomena are often followed by cardiac asthenia and arhythmia of the pulse. Variot thinks it probable that this artificial febrile action plays a certain part in the process of cure, being analogous to the normal febrile reaction seen after serious but curable diphtherias before the serum came into use. Rendu pointed out that in three cases in which he had used the serum in adult patients no rise of temperature followed the injections. Variot thought it possible that the febrile reaction might have been overlooked in these cases owing to the temperature not being taken with sufficient frequency.

TREATMENT OF HEMATEMESIS FROM GASTRIC ULCER.

Enjoin absolute rest in bed, forbidding motion or speech. Apply an ice-bag over the epigastrium. Order iced drinks, ice to suck, and every two hours a cachet containing sodium bicarbonate, 0.50 gramme (7 3-4 grains); rhatany-powder, 0.10 gramme (1 3-4 grains); opium powder, 0.01 gramme (1-6 grain). Give a hypodermic injection, every half-hour, of 1 cubic centimetre (15 1-2 minims) of the following solution; Ergotine, 2 grammes (31 grains); glycerin, cherry-laurel water, each 5 grammes (1 1-4 fluid drachms); as food, a glass of iced milk every two hours, and an injection of yolks of 2 eggs, 10 grammes (2 1-2 drachms) of dry peptones, and 300 grammes (9 1-2 fluid ounces) of milk. Between the attacks have the patient observe a strict milk diet, taking a glass of fresh milk every two hours, with a teaspoonful of dry peptones if the pain is not too severe. Follow the milk with bicarbonate of soda, giving a little in water after each glass of milk. If pain is very severe, prescribe the following: Hydrochlorate of morphine, 0.05 gramme (7-8 grain); hydrochlorate of cocaine, 0.50 gramme (7 3-4 grains); cherry-laurel water, 10 grammes (2 1-2 fluid drachms); julep, 100 grammes (3 1-4 fluid ounces). A tablespoonful three times a day. Continue the treatment until pain has completely ceased, when food may be gradually resumed, preparations of milk, eggs and meat-powders being first allowed, milk with Vichy water being the only drink.—Dr. Malbec in Med. T. & H. G.

Gynecology and Obstetrics.

ACCIDENTAL HEMORRHAGE IN LABOR.

When the os is small and labor-pains weak or absent, preserve the membranes intact as long as possible; in external hemorrhage plug the vagina. If labor is well advanced rupture the membranes, and if hemorrhage continue, deliver by the safest method available. In internal, concealed, and in some cases of external, hemorrhage, if a vital necessity, deliver by accouchment force, or Porro's operation. In all cases proceed with as little force and precipitation as possible.—Dr. W. J. Smyly in Med. Times & H. G.

"INDUCED" MALPRACTICE.

A recent example of newspaper medicine is the outcome of a Coroner's inquest in a case of alleged criminal abortion. The Deputy Coroner is made to testify as follows: "The girl, he found, had died of endometritis, peritonitis, and double pleurisy, caused by malpractice, but whether it was induced or not he was unable to say. In his examination he said that the autopsy revealed that medicines had not been used."—N. Y. Med. Journal.

PURULENT INFECTION IN THE LYING-IN PERIOD.

Intra-uterine injections of iodine; if the temperature does not fall, curetting, or at first simple swabbing out of the uterus. As much nourishment as possible, with alcoholic drinks. Quinine, 1 gramme (15 1-2 grains) in two doses, morning and evening, increasing to 1.50 grammes (23 1-4 grains), but not exceeding 2 grammes (31 grains) in twenty-four hours. Cold ablutions; wet cloths on the head, stomach and thighs;

wet packs, or cold baths. When temperature exceeds 38.5 degrees C. (101.4 degrees F.), no cold baths.—Professor Tarnier in Med. T. & H. G.

CONCEPTION.

The menstrual cycle, if it may be so termed, consisting of 28 days, usually, and embracing time of menstrual flux and intervening days, may be divided into two periods, viz., a genetic and an agenetic period. The genetic period embraces the first 18 days of the menstrual cycle. During this period conception is most likely to occur. If conception occurs within the first third of this period, the parental vigor being equal or nearly so, the child will be a girl; but if conception occurs within the last third the child will be a boy. Within the second third, the earlier or later the period in which conception occurs will govern the sex approximately.

The agenetic period embraces from the 19th day to the close of the menstrual cycle. Within this period conception rarely occurs.—Medical Brief.

CURETTING THE UTERUS IN RETAINED PLACENTA.

Oui, of Bordeaux (Annales de Gynec. et d'Obstet., February, 1895), comments on eight cases of curetting for the removal of placental relics after abortion. The cases all recovered, but Oui bids us remember that certain adjectives applied to the curette by its opponents are not entirely undeserved. The curette has been called "blind." The cri uterin is not trustworthy; Oui declares that it is sometimes heard when the instrument is scraping the surface of placental tissue. It is "unreliable." In two of Oui's cases portions of placenta were left behind, so that a fresh scraping was found necessary. It is "dangerous." This is true; in many cases the operator has poked a hole through the uterus. These objections, however, apply to any other surgical instrument unskilfully used. The operator need not be blind, his finger possesses a sense denied to steel instruments. He must not rely on the curette, and he must use it gently. Two conditions are needed to ensure safety and efficiency when the curette is used. The cervix must be well dilated, and the uterine cavity well explored by the finger. Chloroform is needless, except for very timid women; the curette gives less pain than is felt by the patient during manual extraction. A cutting, not a blunt, curette should be used. Oui finds the irrigating curette clumsy. Swabbing with creasoted glycerine or iodine and intrauterine injections are needed whenever the curette is used, and after the swabbing the uterus and vagina must be plugged with iodoform gauze.

NORMAL EXPULSION OF PLACENTA: DUNCAN OR SCHULTZE?

Teuffel (Monatschrift fur Geburtshulfe u. Gynak., February, 1895) reports 25 cases in which he allowed the placenta to be expelled spontaneously. He made these observations in order to determine the truth of the theory that the placenta is rolled up by the uterine contractions on an axis corresponding to the long axis of the uterus, so as to present by its lower margin (Matthews Duncan) and of the other theory that, especially when the uterus is inert, the placenta is inverted and comes out with its fetal surface foremost (Schultze). Teuffel noted that in 31 cases the placenta was completely inverted, in eight not inverted (Duncan's theory), and in four incompletely inverted. In all the eight which were expelled in the manner Matthews Duncan held to be normal the rent in the membranes lay close to the border of the placenta. In the 13 cases of inversion the rent was found to be central (that is, opposite or as far as possible from the placenta) in 9; in three the tear in the membranes was between the centre and the placental margin. In only one were the membranes torn close to the margin. In the four cases of incomplete inversion the tear was never central, but eccentric in three and marginal in one case. Teuffel sees cause in the site of the

rent and effect in the manner of expulsion. When the after-pains set in the placenta site is lessened the placenta thickened and if the marginal attachment of the membranes be intact the placenta is pressed forwards, assuming a spherical form. The inverted position of the expelled structure is thus assumed, no effusion of blood is necessary to cause it or to hasten expulsion. When the membranes are rent close to the margin of placenta the latter meets with no resistance, so that its edge at the site of laceration is pushed down and takes the lead, after Duncan's fashion. It is evident that any pressure or kneading of the obstetrician's hands on the outside of the uterus tends to expel the placenta in Duncan's manner, as the edge of the structure at some point or other is certain to be pushed forward. Hence Fehling's results, which favor this method of expulsion.

LIVING PREMATURE INFANTS.

Villemin (Annales de Gynec. et d'Obstet., February, 1895) read notes last autumn at a meeting of the Paris Obstetrical Society, on a child which at that date was 31 months old, and of a fine physical and mental development. It was delivered at five and one-half months or at the longest computation at the sixth month. It weighed at birth less than two pounds (950 grammes). By aid of the couveuse and the most careful feeding it was successfully reared. Maygrier declared that he had in one of his wards a six months' child a week old; it weighed only 770 grammes, or under one pound 12 ounces, but it seemed to be sinking. Budin observed that he had known 6 1-2 months' babies to live for a day or two. The respiration was almost purely bronchial, the lungs did not float, and the vesicles were found full of epithelial cells. It is easy to believe that a strong premature infant could succeed in clearing the pulmonary vesicles and live. Charpentier had successfully reared an infant which weighed less than two pounds five ounces at birth.

Therapeutics.

IN CHARGE OF
DR. LOUIS LEWIS, Philadelphia.

A NEW USE FOR TUBERCULIN.

From Vienna comes the intelligence that Professor Wagner is treating insanity by inoculations of tuberculin. The treatment is said to be meeting with success. Experience hitherto has not demonstrated the induction of substitution diseases to have been of any benefit.—The P. & S.

TETANUS ANTITOXIN.

The antitoxin treatment of tetanus seems likely to be as successful as that of diphtheria. Experimentally the effects of the antitoxin are little short of marvelous. Minute doses injected into animals completely neutralize fatal doses of tetanus toxin injected eight or ten hours afterward. The antitoxin also seems to possess curative powers, but much larger doses are necessary when the disease has declared itself than when the substance is used only as an immunizing substance. Immunization is likely to be the key-note of modern medical progress, and doubtless new triumphs are in view. —The P. and S.

THE ANIMAL EXTRACTS.

The employment of of animal extracts as therapeutic remedies dates from time immemorial. Pliny tells us that the Greeks and Romans were accustomed in cases of impotence to make use of the seminal fluid and testicles of donkeys, animals noted for the disproportionate size of the testes. The famous preparations of castor and musk were introduced by Galen, and enjoyed fame and credit for centuries. From that period to the present day numerous examples of this kind of remedy have always existed in our materia medica.

WHOOPING COUGH.

A contributor to the Therapeutische Monatschefte relates the case of a boy, aged 5, whom he had been treating for several weeks for a violent whooping cough. Every variety

of treatment was tried, but without result. One day the child fell and fractured his femur; in order to set it, he was put well under chloroform, and from that hour the cough ceased. The author suggests that there was more than an accidental coincidence in this. It should be noted, however, that the cough had already lasted six months.

Cases of acute or prolonged whooping cough are frequently followed by dilatation and incompetency of the right side of the heart, induced by the disturbance to the intrathoracic circulation. Puffy eyelids, some cyanosis of the mucous membrane, slight albuminuria, increase of cardiac area, are amongst the symptoms of this affection. Owing to the strain in the pulmonary circulation, the irritation of the cough is maintained, and nothing succeeds in curing the the whoop. Hence the importance of watching the heart and noting any failure during whooping cough. For treatment nothing is better than digitalis. The circulation soon improves, and the attacks of whooping soon abate and disappear.

REGARDING HEART TONICS.

Professor Von Ziemssen objects to the tinctures of digitalis and strophanthus on account of their unreliability, and says that both of them should be struck out of the Pharmacopeia. He uses digitalis only in infusion or powder; and strophanthus, in the form of strophanthine, in the dose of 1-64 grain twice a day. This is not cumulative in its action, and, although not so lasting in its effect as digitalis, is the most preferable substitute (Munch. med. Woch., No. 50, 1894). The tincture of strophanthus is conveniently prescribed in one of the compressed forms, and is not only reliable, but free from the nauseating effect the tincture sometimes has.

Strychnine is the best remedy to restore the heart's action during the compensating period of valvular insufficiency. When existing compensation is disturbed, it is also a valuable adjunct of digitalis.

NITRO-GLYCERINE IN SCIATICA.

Dr. Lawrence (Rivista de Ciencias Medicas de Barcelona), reports the case of a carpenter, of 52 years of age, who suffered for several years with sciatica. In order to alleviate the pain he had become a morphine user, and could not abandon the habit. After trying a multitude of drugs, he gave him a 1-100 solution of nitroglycerine, one drop three times a day, gradually increasing the dose to five drops. Relief was almost immediate, and in 10 days he could resume his work, completely cured.

ARISTOL IN OPHTHALMIC PRACTICE.

Heuse (Therap. Monatsh., February, 1895), as the result of lengthened investigations, finds that aristol is an excellent remedy in long existing corneal ulcers, especially where the base is covered by pus which is not readily detached. While several other applications failed, aristol applied as a powder by means of a brush, the eye being subsequently closed, led to the cleansing of the ulcer in two days. A curative action, however, cannot be ascribed to the powder. As an ointment containing 5 per cent., it proved most successful in ulcerative blepharitis and obstinate chronic hordeola, where, on account of its non-irritating properties, it might be used henceforth in preference to the yellow oxide of mercury.

Miscellany.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

The forty-fifth annual meeting will be held in Chambersburg, on Tuesday, Wednesday, Thursday and Friday, May 21, 22, 23 and 24, 1895, commencing on Tuesday, May 21, at 9 A. M.

APPOINTMENTS FOR 1895.

Address on Practice of Medicine, Dr. I. C. Gable, York; address on Surgery, Dr. C. L. Stevens, Athens; address on Obstetrics, Dr. W. B. Ul-

rich, Chester; address on Mental Disorders, Dr. F. X. Dercum, Philadelphia; address on Otology, Dr. L. H. Taylor, Wlikesbarre; address on Hygiene, Dr. Hildegarde N. Longsdorf, Dickinson.

TO BE ACTED UPON.

Report of Committee on Contagious Ophthalmia, Dr. J. A. Lippincott, Pittsburg, chairman; Report of Committee on Rush Monument Fund, Dr. W. Murray Weidman, Reading, chairman; Report of Committee on Pharmacy, Dr. Adolph Koenig, Pittsburg, chairman; Report of the Legislative Committee, Dr. I. C. Gable, York chairman; Report of Committee on Increase of Membership, Dr. C. L. Stevens, Athens, chairman; Report from the State Board of Medical Examiners.

AMENDMENTS TO RULES AND BY-LAWS.

That all papers presented shall be limited to 10 minutes in delivery and each discussion of them to five minutes.

Amend Article XIII by inserting section 7: It shall be the duty of the Committee on Scientific Business to prepare and arrange the programme of scientific papers and discussions, and to furnish a copy of the same to the Committee of Arrangements 30 days before the holding of each meeting.

Section 7 to be Section 8.

Chairman of Committee of Arrangements, Dr. George S. Hull, Chambersburg; Committee on Scientific Business, Dr. Charles W. Dulles, chairman, 4101 Walnut street, Philadelphia, to whom all applications to read papers at this session should be sent.

Secretaries of County Medical Societies are earnestly requested to forward at once complete lists of their officers and members, giving the post-office address of each.

Every delegate, before admission, shall present a certificate of delegation, signed by the president or secretary of his county society.

Every permanent member (not a delegate) before admission, shall present a certificate of good standing in his county society.—Extract from Constitution.

Secretaries, delegates and permanent members are urgently requested to remember these rules, as on several occasions persons have registered who were not in good standing in their County Society.

WM. B. ATKINSON,
Permanent Secretary.

The railroads will sell excursion tickets on card orders. All who desire orders should notify the permanent secretary, stating which railroad must be used.

Prescriptions.

INFLUENZA.

℞ Antipirinæ gr. v.
Sodæ Bicarb. gr. v.
Spirit Ammon. Aromat. mx.
Elixir Simpl. dr. ss.
Tinct. Opii. mij.
Aq. Anethi ad oz. ss.
M. ft. Dosis

S.—One tablespoonful every half-hour for three doses, then every two hours, every three hours, and afterwards every four hours if still required.

This is a digestible form, and not depressing. The combination of a small dose of laudanum rapidly removes the depressing symptoms, and appears to prevent nervous prostration afterwards. Its combination with antipyrin has been extensively used at one of the largest metropolitan hospitals.

The headache of influenza can generally be best relieved by phenacetin. Its depressing effect is counteracted in the following prescription:

R. Phenacetin, gr. v.
Caffein, Hydrobrom, Efferves, ad dr. ij.

S. To be taken in a wineglass of water, and repeated every two hours for three doses, unless sooner relieved.

PHOSPHATURIA.

R. Acid Benzoic. dr. vj.
Sodæ Biborat dr. v.
Aquæ ad ounces viij.

M. Sig.—One tablesponful for a dose.—London Practitioner.